

once cut between two artery forceps, and artificial respiration resorted to.

After a second examination, a second child was delivered by forceps; and later a third child "in caul" on pressure on the fundus. A hot douche was given, and an injection of ergotine citrate, and a post-partum mixture prescribed. The placenta was a large one; all three children were of the same sex (female) and equally developed. They all lived for only some 48 hours; the mother, however, made an uneventful recovery.

THE DOSAGE OF ANTI-TETANIC SERUM.

By M. A. KRISHNA IYER, L.M.P.,
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In the October 1924 issue of the *Indian Medical Gazette*, Dr. Nagendra Nath Ghosh reported the treatment of a case of puerperal tetanus with anti-tetanic serum in doses much smaller than those generally recommended or advocated in the text books. Shortly after the publication of his case, I had occasion to deal with two cases of tetanus, one after the other, for which I adopted the same procedure of treating them with small doses of anti-tetanic serum with success. Though there is nothing unusual in these cases, it may be of interest to note that smaller doses of serum than the single massive doses of 15,000 to 20,000 units usually advocated can often be employed with success, and with considerable saving of expenditure.

Case 1. On the 9th October, 1924, I was called to see a woman, aged 30, in a neighbouring village, on the eighth day of her illness. The infection with tetanus had apparently been contracted by the genital route as the result of a miscarriage in the fourth month of pregnancy, some 25 days previously. When I saw her, lock-jaw was complete, and the spasms of the whole body so numerous that I witnessed about 50 attacks during the hour which I spent in attendance on her that day. The temperature was 101.5° F., and risus sardonicus was well marked.

Two hypodermic injections of the serum, each of 1,500 units were given that day; and repeated doses each of 1,500 units on the 10th, 11th and 12th October. The number of convulsions was now reduced, but her condition was otherwise unchanged. The same dose of 1,500 units was again repeated on the 14th, 16th, 17th, 18th and 19th October, the doses being given intravenously.

On the 19th, her condition was markedly improved; two further similar intravenous injections were given on the 21st and 23rd, after which the spasms ceased to appear; she could sit up and take food, and even walk with assistance.

From the beginning the usual bromide and chloral mixture was given. The injections were now stopped, and convalescence was uneventful.

Case 2. This was in a boy aged 9 years: whom I first saw on the third day of illness. He had been vaccinated some three weeks previously, and, as I could find no other lesion which could have been responsible for the tetanus, I am inclined to incriminate the vaccination. The symptoms and signs were typical of tetanus, and although the number of spasms was less frequent than in the first case, the opisthotonus posture assumed during each spasm was very marked and continued for some twenty minutes at a time, the boy screaming out during each attack.

I first saw him on the 2nd January, 1925, when the tetanus was of three days' duration, and gave 750 units hypodermically that day. From the 3rd to the 9th January, a daily dose of 750 units was given intravenously. By this time the boy's condition was much improved; he could open his mouth; the spasms were few and of short duration; he could sit up and slept well. Two more intravenous injections, each of 750 units, were given on the 11th and 13th. By the 15th the patient could walk with help, and could take his normal food. In this case also the usual bromide and chloral mixture was given.

As pointed out by Dr. N. N. Ghosh, repeated administration of small doses of anti-tetanic serum may be just as efficacious as the administration of one or two heroic doses. There were no untoward symptoms of any kind in these two cases as the result of giving small doses in place of large; whilst the cost of anti-tetanic serum is so high that large single doses prove very expensive. The serum used in these two cases was that of Messrs. Parke, Davis & Co.

A TUMOUR OF THE ABDOMINAL WALL.

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M. B., a Mahomedan male, aged about 32 was admitted to the Balasore Hospital on the 27th August, 1924.

Clinical signs on admission.—On inspection a distinct swelling is visible in the middle of abdomen, more in the lower part than in the upper; on palpation, the swelling is distinctly hard to the touch; its area is 6 in. × 6 in.; the skin is movable over it and it is also distinctly tender; no redness of the skin nor any œdema in it. The feeling of the swelling is like that of a solid abdominal tumour; its duration is a fortnight before admission and it is in the same condition as at first; there is no fluctuation in the swelling.